

CLAIMS

1. In a capping board for use to support anodes and cathodes
5 within adjacent electrolytic cells, said capping board having a given length
and comprising a plurality of individual insulating seats positioned in spaced
apart relationship all along said length to receive and support hanging legs
projecting from said anodes and cathodes, the improvement wherein said
capping board comprises at least one sheet or wire of electrically conductive
10 material embedded therein, said at least one sheet or wire extending over the
length of the board and being shaped and positioned so that part of it
extends externally within at least some of the insulating seats so as to allow
electrical contact of the legs of either the anodes or the cathodes.

15 2. The improved capping board of claim 1, wherein said capping
board comprises a main body with a bottom surface shaped fit onto upper
edges of two of said adjacent cells, and a top surface in which said individual
seats are made, said seats being in the form of recesses each forming a
laterally opening compartment separated from the adjacent one by means of
20 a vertical partition.

3. The improved capping board of claim 2, wherein said capping
board comprises a plurality of said adjacent compartments that extend in
rows over all its length on both sides of the main body and wherein the
25 conductive material embedded into said capping board is in the form of two
sheets, one of said sheets connecting every other of said insulating seats
formed by the compartments located on one side of the main body, the other
one of said sheets connecting every other of said insulating seats formed by
the compartments located on the other side of the main body.

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4. The improved capping board of claim 3, wherein the recesses
forming the adjacent compartments on each side of the main body are of two

different depths, each recess having one of said depths being adjacent to a recess having the other one of said depths.

5 5. The improved capping board of claim 4, wherein each of said at least one sheet of conductive material is of L-shaped cross-section and provided with teeth and is embedded in the capping board in such a manner that its teeth extend externally in the bottoms of the recesses forming the compartments of every other insulating seats to be connected to each other.

10 6. The improved capping board of claim 5, wherein each of said at least one sheet or wire of conductive material is made of copper.

15 7. The improved capping board of claim 1, wherein said capping board comprises a main body with a bottom surface shaped to fit onto upper edges of two of said adjacent cells and a top surface in which said individual seats are made, said seats being in the form recesses made on top of spaced-apart insulating blocks integral to and upwardly projecting from the top surface of the main body, each of said recesses forming a laterally opening compartment.

20 8. The improved capping board of claim 7, wherein said capping board comprises a first set of said spaced part insulating blocks extending in line all over its length on one side of the main body, and a second set of said spaced apart insulating blocks extending also in line all over its length at a given lateral distance from the first set of blocks, said two sets of blocks forming two rows that together define a central path in which a contact bar may be positioned.

30 9. The improved capping board of claim 8, wherein the insulating blocks of the first set are in alternate position relative to those of the second one, whereby an anode or cathode having one leg held within a recess made on top of one of said insulating blocks on one side of a cell may have

its opposite leg that extends between to adjacent insulating blocks of another capping board located on the other side of the cell and thus bears onto the contact bar in the central path of said other capping board.

5 10. The improved capping board of claim 9, wherein the
conductive material embedded into said capping board is in the form of a
sheet and each of said at least one sheet of conductive material comprises a
base from which integrally project a plurality of L-shaped teeth, each of said
teeth extends into one of said insulating blocks in such a manner as to have
10 part of it that extends externally into the recess forming the compartment on
top of said one block.

11. The improved capping board of claim 10, wherein each of said
at least one sheet of conductive material is made of copper.

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12. The improved capping board of claim 1, wherein said board is
made from a plastic resin selected from the group consisting of
polytetrafluoroethylene, acid resistant polyester, polyvinyl ester, epoxy,
polyurethane, thermoset polyurethane and phenolic resins and blends
20 thereof, and contains from 3 to 30% by weight of glass fibres, from 2 to 10%
by weight of silica sand, from 1 to 30% by weight of mica, from 2 to 60% by
weight of silica rocks, optionally from 2 to 40% a filler selected from the group
consisting of clay, talc, calcium carbonate and magnesium oxide and
optionally from 0.1 to 5% of fumed silica.

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13. The improved capping board of claim 12, wherein said board
also comprises at least one embedded pultruded bar, each of said at least
one pultruded bar being obtained by pultrusion of fibres selected from the
group consisting of glass fibres, cizal fibres, resins fibres and carbon fibres,
30 with a resin selected from the group consisting of polyester, vinyl ester,
epoxy, polyurethane, thermoset urethane, bisphenol-epoxy A – F fumarate
polyester series, acrylic and methacrylic, teerephtalate polyester and

phenolic resins and their mixtures, said at least one pultruded bar being further coated with a surface layer of a resin bonding agent.

14. The capping board of claim 13, wherein more than one
5 pultruded bars are embedded into said capping board, said bars being spaced-apart and arranged in a parallel relationship over the full length of said capping board.

15. A capping board according to claim 14, wherein the glass
10 fibres of the capping board are in the form of a woven cloth or a pressed mat previously impregnated with said resin and mica, said cloth or mat being folded, rolled or brushed in layers so as to obtain the desired final shape and being re-impregnated with said resin and dusted with said silica sand and silica rocks during the folding, rolling or brushing process to ensure good
15 adhesion between the layers.

16. The improved capping board of claim 6, wherein said board is made from a plastic resin selected from the group consisting of polytetrafluoroethylene, acid resistant polyester, polyvinyl ester, epoxy,
20 polyurethane, thermoset polyurethane and phenolic resins and blends thereof, and contains from 3 to 30% by weight of glass fibres, from 2 to 10% by weight of silica sand, from 1 to 30% by weight of mica, from 2 to 60% by weight of silica rocks, optionally from 2 to 40% a filler selected from the group consisting of clay, talc, calcium carbonate and magnesium oxide and
25 optionally from 0.1 to 5% of fumed silica.

17. The improved capping board of claim 16, wherein said board also comprises at least one embedded pultruded bar, each of said at least one pultruded bar being obtained by pultrusion of fibres selected from the
30 group consisting of glass fibres, cizal fibres, resins fibres and carbon fibres, with a resin selected from the group consisting of polyester, polyvinyl ester, epoxy, polyurethane, thermoset urethane, bisphenol-epoxy A – F fumarate

polyester series, acrylic and methacrylic, terephthalate polyester and their mixtures, said at least one pultruded bar being further coated with a surface layer of a resin bonding agent.

5 18. The improved capping board of claim 11, wherein said board is made from a plastic resin selected from the group consisting of polytetrafluoroethylene, acid resistant polyester, polyvinyl ester, epoxy, polyurethane, thermoset polyurethane and phenolic resins and blends thereof, and contains from 3 to 30% by weight of glass fibres, from 2 to 10%
10 by weight of silica sand, from 1 to 30% by weight of mica, from 2 to 60% by weight of silica rocks, optionally from 2 to 40% a filler selected from the group consisting of clay, talc, calcium carbonate and magnesium oxide and optionally from 0.1 to 5% of fumed silica.

15 19. The improved capping board of claim 18, wherein said board also comprises at least one embedded pultruded bar, each of said at least one pultruded bar being obtained by pultrusion of fibres selected from the group consisting of glass fibres, cizal fibres, resins fibres and carbon fibres, with a resin selected from the group consisting of polyester, polyvinyl ester,
20 epoxy, polyurethane, thermoset urethane, bisphenol-epoxy A – F fumarate polyester series, acrylic and methacrylic, terephthalate polyester and phenolic resins and their mixtures, said at least one pultruded bar being further coated with a surface layer of a resin bonding agent.